

ACCESSION NR: AP4041049

S/0120/64/000/003/0186/0189

AUTHOR: Gavrilova, N. D.; Novik, V. K.

TITLE: Outfit for dynamic study of the pyroelectric effect in a wide temperature range

SOURCE: Pribery* i tekhnika eksperimenta, no. 3, 1964, 186-189

TOPIC TAGS: pyroelectric effect, crystal pyroelectric characteristics

ABSTRACT: An outfit suitable for measuring pyroelectric characteristics of crystals within $-190+120^{\circ}\text{C}$ is shown in Enclosure 1. Light from source 1 passes through flicker shutter 3 driven by motor 4. Thus, a modulated beam is focused, by optical system 2 of an IKS-11 spectrometer, at the surface of crystal 6 mounted in holder 7 inside cryostat 8. Details of the cryostat design are given. The effects of temperature and field strength on the pyroelectric current in a triglycine-sulfate crystal were studied on the above outfit; the results obtained

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are said to be in agreement with A. Chynoweth's data (J. Appl. Phys., 1956, 27, 78, and Phys. Rev., 1956, 102, 1021). "The authors consider it their pleasant duty to thank V. A. Koptsik for his guidance, Ye. G. Valyashko and I. M. Sil'vestrova for their valuable advice re the outfit design, and also B. A. Strukov for his constant attention to the project and fruitful discussions." Orig. art. has: 4 figures and 1 formula.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University); Moskovskiy stankoinstrumental'nyy institut (Moscow Machine and Tool Institute)

SUBMITTED: 03Jul63

DATE ACQ: 00

ENCL: 01

SUB CODE: EC

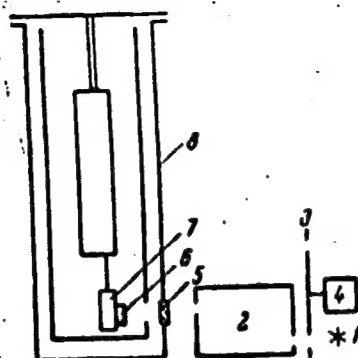
NO REF SOV: 002

OTHER: 008

Card 2/3

ACCESSION NR: AP4041049

ENCLOSURE: 01



Outfit for measuring the dynamic
pyroelectric effect

Card 3/3

L 28722-65 EWT(1)/EPA(s)-2/EEC(t) Pt-10/P1-4 IJP(c) GG

ACCESSION NR: AP5004348

S/0070/65/010/001/0114/0116

AUTHOR: Gavrilova, N. D.

TITLE: New pyroelectric crystals

31
B

SOURCE: Kristallografiya, v. 10, no. 1, 1965, 114-116

TOPIC TAGS: pyroelectricity, piezoelectricity, crystal symmetry

ABSTRACT: In connection with the increased use of pyroelectrics as sensitive recorders of low heat fluxes, the author presents a table of 70 new crystalline pyroelectrics, observed by her (at liquid nitrogen temperature) by means of powder tests. The method was described by W. G. Cady (Piezoelectricity, McGraw Hill, 1946). The table lists the name, chemical formula, and symmetry of the crystal, and shows that the known piezoelectric crystals possessing pyroelectric symmetry are pyroelectrics. Orig. art. has: 1 table.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University)

Card 1/2

L 28722-65

ACCESSION NR: AP5004348

SUBMITTED: 10Apr64

ENCL: 00

SUB CODE: SS

NR REF SOV: 002

OTHER: 002

Card 2/2

L 57581-65 EWT(1)/EWT(m)/EPF(c)/EWP(j)/T/EWP(t)/EEC(b)-2/EWP(b) Pc-4/Pr-4/Pl-4

IJP(c) JD/GG/RM

ACCESSION NR: AP5013716

UR/0070/65/010/003/0346/0350

548.0:537

48
47
B

AUTHOR: Gavrilova, N. D.

TITLE: Use of the static method for studying the effect of temperature on the pyroelectric coefficients of crystals 21

SOURCE: Kristallografiya, v. 10, no. 3, 1965, 346-350

TOPIC TAGS: pyroelectric effect, tourmaline, ferroelectric, crystallography

ABSTRACT: The equivalent circuit for measuring pyroelectric charge by the static compensation method was calculated and analyzed. An experimental set-up is described as well as the results of its operation with green tourmaline. The pyroelectric coefficient was measured as a function of temperature under constant mechanical stress for single crystals of barium titanate and triglycerin sulfate. It was established that application of a constant electric field to the crystal displaces the peak value of the pyroelectric current towards the Curie point and smooths it out substantially. At the temperature of the maximum pyroelectric effect T_M (below the Curie temperature) the domain structure of the ferroelectric is reor-

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L 57581-65

ACCESSION NR: AP5013716

ganized so that when external fields are absent, the crystal is transformed to a macroscopically neutral electric state. Orig. art. has: 5 figures, 3 formulas.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University)

SUBMITTED: 13May64

ENCL: 00

SUB CODE: SS, EM

NO REF SOV: 005

OTHER: 008

Card 2/2

L 7845-66 EWT(1)/EWP(a)/EPA(a)-2/EWT(m)/EWP(i)/EPA(w)-2/EWP(t)/EWP(b) IJP(e)

ACC NR:

AP 5028099

JD/GG/WH

SOURCE CODE: UR/0048/G5/029/011/1969/1973

AUTHOR: Kopstik, V.A.; Gavrilova, N.D.

ORG: Physics Department, Moscow State University im. M.V. Lomonosov (Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta)

TITLE: Experimental investigation of the pyroelectric effect in ferroelectric crystals /Report, Fourth All-Union Conference on Ferro-electricity held at Rostov-on-the-Don 12-16 September 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya. v. 29, no. 11, 1965, 1969-1973

TOPIC TAGS: Pyroelectricity, ferroelectricity, single crystal, electric domain structure, barium titanate, ferroelectric crystal, organic crystal

ABSTRACT: Measurements by one of the authors (N.V. Gavrilova, Kristallografiya, 10, 346 (1965)) of the pyroelectric constants of barium titanate, triglycine sulfate and Rochelle salt are presented graphically and discussed with reference to the dynamic theory of V.Kh. Kozlovskiy (Izv. AN SSSR. Ser. fiz., 29, No. 6, 882 (1965)). The measurements were made by a static compensation method while the samples (0.1-0.6 mm thick 8-32 mm² area crystal plates) were heated in the absence of an external field. These are the first absolute static measurements with an accuracy of 2.3% of the pyroelectric constants of barium titanate and triglycine sulfate. The maximum of the pyroelectric constant occurred for all the materials at a

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L 7845-66

ACC NR: AP 5028099

0

temperature considerably below the Curie point. The maximum of the pyroelectric constant is associated with a transformation of the domain structure from the unipolar state to the macroscopically nonpolar state. The temperature (T) dependence of the polarization (P) was given for all the materials by the equation $T/T_m = (P/P_m)^2 (2 - (P/P_m)^2)$, where T_m and P_m are constants. This formula was derived from the dynamic theory (loc.cit.surpa) for an antiferroelectric with two rigid sublattices; for the case of a ferroelectric with a domain structure, the formula corresponds to neglect of the contribution of the surface energy of the domain walls to the free energy of the crystal. Orig. art. has: 9 formulas and 4 figures.

SUB CODE: SS, EM, TD

SUBM DATE: 00/

ORIG. REF: 007 OTH REF: 005

Card 2/2

SOV/144-58-10-6/17

AUTHORS: Berger, A.Ya., Candidate of Technical Sciences, Professor
Gavrilova, N.G., Assistant

TITLE: The Optimum Length of Air Gap Under the Main Poles of
Direct Current Machines (Ob optimal'noy velichine
vozdušnogo zazora pod glavnymi polyusami mashiny
postoyannogo toka)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Elektromekhanika,
1958, Nr 10, pp 52-64 (USSR)

ABSTRACT: Surprisingly little attention has been paid to
selection of the air gap length in d.c. machines. The
object of this article is to analyse the influence of
the air gap length on the main properties of the d.c.
machine to review the existing recommendations of
various authors and to suggest criteria for selection of
the air gap length and determination of its best value.
Recommended air gap lengths for machines without
compensating windings are first considered, starting
with Arnold's recommendation designed to ensure
satisfactory commutation. Formula (2) given by Richter
and others is used in the Elektrosila works, values of
the factor k are given in Table 1. Three other

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SOV/144-58-10-6/17

The Optimum Length of Air Gap Under the Main Poles of Direct
Current Machines

recommendations are also given. Recommendations for machines with compensating windings are then given particularly that of Kas'yanov, see Eq (6). Values of k in formula (2), recommended by various authors and used in actual machines are compared in Table 1, and values of k , the air gap length and numerous other data for a number of motors manufactured by Elektrosila and also for the Siemens GM series are given in Tables 2, 3 and 4. It is shown that some of the formulae give air gap lengths very different from those actually used and that none of the authors takes into account all the factors that should be considered in selecting the length of air gap. Properties of a direct current machine that depend on the length of the air gap are then considered in turn, particularly: the weight of the field winding; the stray losses of the pole-piece surfaces; the amplification factor of the machine; the time constant of the machine; the noise; the speed and critical speed of the motor; and the greatest

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SOV/144-58-10-6/17

The Optimum Length of Air Gap Under the Main Poles of Direct Current Machines

output that can be obtained from a machine of a given diameter. Certain criteria governing the best choice of air gap length for machines with compensating windings are then given. Eq (21) is obtained for the best air gap length determined from the criterion of minimum losses on excitation and on the pole piece surfaces. Eq (22) is obtained for the best air gap length from considerations of overall costs. It is concluded that for machines without compensating windings the air gap length is best selected by appropriate choice of the factor k in Eq (2). To a first approximation the value may be selected from Tables (1) and (2) but it is necessary to check that the voltage between neighbouring commutator bars is not too great. The method of doing this is briefly explained. For machines with compensating windings it is recommended to use Kas'yanov's formula (6) and to check it against the expressions for minimum loss and minimum overall cost. For high speed machines with relatively high losses on the pole piece surfaces, it is advisable to use formula (21) derived for the least cost.

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SOV/144-58-10-6/17

The Optimum Length of Air Gap Under the Main Poles of Direct Current Machines

In using this formula it should be checked that the reduction in the losses is great enough and that it does not lead to excessive increase in size and weight of the machine. Numerical examples of calculation of optimum air gap length are given in an appendix. There are 2 figures, 4 tables and 11 references, 8 of which are Soviet and 3 German.

ASSOCIATION: Kafedra elektricheskikh Mashin i Apparatov Severo-Zapadnogo zaochnogo Politekhnikeskogo Instituta (Chair of Electrical Machines and Apparatus, North West Correspondence Polytechnical Institute) (Berger)
Leningradskiy Institut Aviatsionnogo Priborostroyeniya (The Leningrad Aviation Instrument Institute) (Gavrilova)

SUBMITTED: 4th June 1958

Card 4/4

SHPICHINETSKIY, Ye.S.; ROSEL'BERG, I.L.; LUZENBERG, A.A.; GOLOMOLZINA, Yu.A.
AGAFONOV, A.K.; Primali uchastiye: MIZONOV, V.M.; GALAKTIONOVA,
G.A.; GAVRILOVA, N.G.; SAMSONOV, I.P.; KOPEYKA, E.I.; GLEBOV, V.P.

Investigating the darkening of nickel strips during annealing.
Trudy Giprotsvetmetobrabotka no.20:125-135 '61. (MIRA 15:2)
(Nickel--Heat treatment) (Annealing of metals)

GAVRILOVA, N.G.; GUSEV, A.V.; DZHAILLOV, U.

Dactylogyrus from Capoetobrama kuschakewitachi (Kessler).
Trudy Zool. inst. 35:132-136 '65. (MIRA 19:1)

1. Zoologicheskiy inatitut AN SSSR; Leninabadskiy gosudarstvennyy
pedagogicheskiy institut imeni S.M. Kirova, i Institut zoologii
i parazitologii AN Tadzhikskoy SSR.

GAVRILOVA, N.I.

Category : USSR/Optics - Physiological Optics

K-9

Abs Jour : Ref Zhur - Fizika, No 2, 1957, No 5324

Author : Gavrilova, N.I.

Inst : Leningrad State University, USSR

Title : On the Investigation of the Functional State of the Human Visual Analyzer.

Orig Pub : Probl. fiziol. optiki, 1955, 11, 9-13

Abstract : Measurement of the light threshold, equivalent to the optical chronaxis, to the chronaxis of phosphene, and to the threshold of doubling of phosphene where measured in five persons (chronaxis is the threshold time of action of a stimulus that is twice as strong than the threshold stimulus upon prolonged action; the threshold of doubling is the minimum interval between two stimulations, at which it is noticeable that the stimulation is doubled. During the process of darkness adaptation the chronaxis increases in most observers, but in one observer it was diminished somewhat; the threshold of doubling diminishes, and the threshold of phosphene increases slightly. In addition, a study was made of the action of certain medications on all the above thresholds, and of the relationship between the duration and the threshold intensity of the light pulse at the different stages of adaptation.

Card : 1/1

GAVRILOVA, N.I.

Trace reflex phenomena in the development of color and light discrimination [with summary in English]. Vest. LGU 13 no.3:142-147 '58.
(SIGHT) (CONDITIONED RESPONSE) (MIRA 11:5)

GAVRILOVA, N.I.; KROL', T.M.

Work at the seminar on neurodynamics. Vest. LGU 13 no.3:152-154 '58.
(NERVOUS SYSTEM) (MIRA 11:5)

GAVRILOVA, N.I.

Conditioned reflex variations in the excitability of the visual
analyser in man. Uch. zap. LGU no.239:146-153 '58.

(MIRA 12:1)

1.Laboratoriya fiziologii analizatorov Fiziologicheskogo instituta
Leningradskego gosudarstvennogo universiteta.
(VISION) (CONDITIONED RESPONSE)

GAVRILOVA, N. I., Cand Biol Sci -- (diss) "Adjusted conditioned reflexes of the visual analyzer in man." Leningrad, 1960. 15 pp; (Leningrad Order of Lenin State Univ im A. A. Zhdanov); 200 copies; price not given; (KL, 24-60, 130)

GAVRILOVA, N.I.

Selective change in the excitability of the visual analyzer
following development of a conditioned reflex. Nerv. sist.
no. 2:142-145 '60. (MIRA 14:4)
(REFLEXES)

GAVRILOVA, N.I.

Formation of "tuning" conditioned reflexes in man. Zhur. vys. nerv.
deiat. 10 no.2:195-199 Mr-Apr '60. (MIRA 14:5)

1. Laboratory of Physiology of Analyzers, Uktomsky Institute of
Physiology, Leningrad University.
(CONDITIONED RESPONSE) (VISION)

41532

S/822/62/000/003/001/001
D296/D307

276110

AUTHOR: Gavrilova, N.I.

TITLE: Dependence of the visual threshold on the shape and area of the test-object

SOURCE: Leningrad. Universitet. Fiziologicheskii Institut. Nervnaya sistema, no. 3, 1962, 135-138

TEXT: The author studied the relation of two factors: intensity and space (in particular the shape of the test-object) in estimations of the absolute visual threshold of a human eye adapted to darkness. The experiments were carried out with the aid of an optical adequatometer (constructed by P.O. Makarov) provided with a special iris diaphragm which permitted any desired variation of the exposed area of the retina. After an initial adaptation period in the dark, lasting for 20 minutes, one eye was exposed to light for 10 minutes (intensity of light on the adaptation screen 100 cp); after a second adaptation period the visual threshold was measured at 5 minute intervals. Study of the relation between the size of

Card 1/2

Dependence of the visual ...

S/822/62/000/003/001/001
D296/D307

the exposed retina area and the visual threshold revealed that these two magnitudes were in a hyperboloid relation both in the case of achromatic and of color vision. To this purpose a small (10° - 50°) and large retinal areas (11° - 55°) were respectively exposed to light. The second variant of the experiments was concerned with the relation between the visual threshold and the shape of the test-object: circles, squares, triangles and rectangles. Here two different thresholds: - the first perception of diffuse light and the threshold of recognition of the shape - were estimated. The threshold for diffuse light perception proved to be almost independent on the shape of the object; the visual threshold for recognition of the shape, however was significantly higher for circles and squares than for triangles and rectangles of identical area. There are 2 figures and 2 tables.

ASSOCIATION: Kafedra biofiziki (Department of Biophysics)

Card 2/2

GAVRILOVA, N. P.

18
 X-ray study of the alloys in the ternary system $\text{Ni}-\text{Al}-\text{Mn}$.
 Gavrilova, N. P., *Byull. Nauch. Sluzhben. Akad. Nauk SSSR, Ser. Khim. Nauk*, 1954 (U'vov, Univ. Izdatel.), Publ. 1955, No. 2, 71-73 (in
 Ukrainian); *Referat. Zhur. Akad. Nauk SSSR*, 1956, No. 3448. —Alloys
 contg. 60 and 26 at. % of Al were heated at 400° for 160
 hrs. and at 800° for 2 hrs., and quenched in water. At
 400° the electron compd. NiAl and also close to it a ternary
 alloy have a homogeneous structure. At 800° all alloys
 are homogeneous; therefore between NiAl and MnAl there
 exists a continuous series of solid solns. MnAl is hetero-
 genous. At 400° and 800° the zone of homogeneity of this
 electron compd. is displaced somewhat toward the greater
 Al content. At 25 at. % of Al all alloys with the highest
 content of Ni are homogeneous. At 800° NiAl was
 homogeneous; MnAl, heterogeneous. The forma-
 tion of continuous series of solid solns. between NiAl and
 MnAl at 800° is connected with the absence of
 ternary electron compds. in the case of the system $\text{Ni}-\text{Al}-\text{Mn}$.
 At this was studied.
 Aleks. N. Bortov

CAVRILOVA, N. S.

CAVRILOVA, N. S. - "Effect of the Time of the First Breast Feeding of a Neonatal baby on the Lactation and on the Change in its Weight." Khar'kov Med Inst, Khar'kov, 1955 (Dissertations for Degree of Candidate of Medical Sciences)

SQ: Krishnaya Letopis' No. 26, June 1955, Moscow

ACC NR: AT6026766

SOURCE CODE: UR/2754/66/000/005/0031/0050

AUTHOR: Gavrilova, M. S.; Kirillov, V. V.

ORG: none

TITLE: Propagation of long wavelength waves. Computation of coefficients of reflection of plane waves from a nonhomogeneous anisotropic plasma

SOURCE: Leningrad. Universitet. Problemy difraktsii i rasprostraneniya voln, no. 5, 1966. Rasprostraneniya radiovoln (Radio wave propagation), no. 4, 31-50

TOPIC TAGS: plasma wave propagation, radio wave propagation, LF propagation, ionospheric propagation

ABSTRACT: The reflection properties of the ionosphere in the region of kc frequencies is studied. The problem is formulated mathematically for day and night models of the electron density distributions which take into account the presence of the earth's magnetic field. The admittance and reflection matrices were computed on the M-20. They show that at low frequencies (<10-15 kc) the change in electron density gradients has a negligible effect on these quantities. The results further show the effect of the angle of incidence of the broadcast wave on the ionosphere. The quasi-Brewster effect is found to have some influence on the reflection coefficients; the magnetic field effects are small when grazing incidence angles are considered. An error analysis of

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ACC NR: AT6026766

the analytical method indicates that frequency regions can be selected where the accuracy of the results is very good. For illustration, several numerical examples have been worked out. The results show that the effect of uncertainty in the initial conditions on the reflection and admittance coefficients is of the order of a few percent for realistic cases. Orig. art. has: 7 figures, 12 formulas, 3 tables.

SUB CODE: 17,20/

SUBM DATE: none/

ORIG REF: 004/

OTH REF: 017

Card 2/2

IVANOVSKAYA, T.L.; GAVRILOVA, N.S.

Effectiveness of localized surface placement of organomineral
fertilizers for beets and eggplants. Agrobiologia no.6:93-97
M-D '58. (MIRA 12:1)

1. Institut genetiki AN SSSR, g. Moskva.
(Sugar beets--Fertilizers and manures)
(Eggplant--Fertilizers and manures)

GRISHCHENKO, I.I., prof. ; GAVRILOVA, N.S., kand.med.nauk

Rural obstetrical service in Kharkov Province. Akush. i gin.
no.2:103-105'63. (MIRA 16:10)

(KHAR'KOV PROVINCE -- OBSTETRICS)

ACCESSION NR: AT4043150

ENCLOSURE: 04

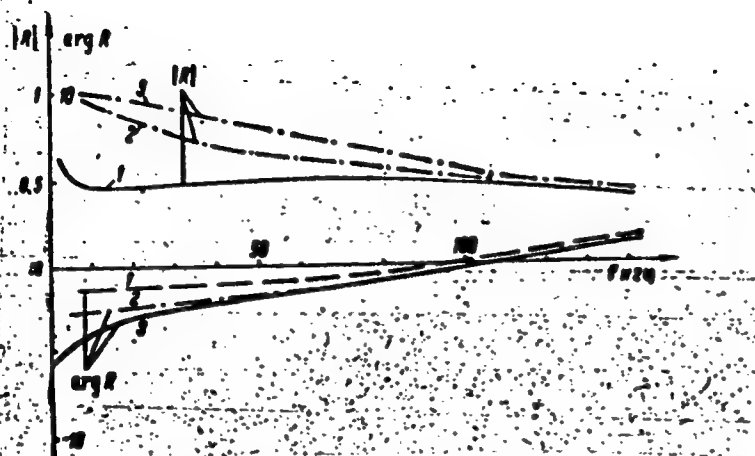


Fig. 4 Comparison of various computation methods for $\Psi = 70^\circ$:
 1 - numerical integration,
 2 - standard (asymptotic) equation,
 3 - W.K.B.

Card 7/7

ACCESSION NR: AT4043150

S/2754/64/000/003/0192/0201

AUTHOR: Gavrilova, N. S.; Loginova, O. N.; Makarov, G. I.

TITLE: Calculation of the reflection coefficient of a smooth heterogeneous layer

SOURCE: Leningrad. Universitet. Problemy* difraktsii i rasprostraneniya voln, no. 3, 1964. Rasprostraneniye radiovoln (Radio wave propagation), no. 3, 192-201

TOPIC TAGS: radio wave, radio wave propagation, radio wave reflection, reflection coefficient

ABSTRACT: This article is a continuation of the authors' previous work in which they derived the asymptotic forms of solutions of Maxwell's equations, applicable to the propagation of radio waves in an unbounded, smooth layer. In this work, the numerical integration of Maxwell's equations for a heterogeneous layer is performed and the resulting values of the reflection coefficient are compared with the values obtained from asymptotic solutions and solutions of the W.K.B. type as described by L. M. Brekhovskikh. The dielectric

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ACCESSION NR: AT4043150

constant is assumed to be uniform up to an altitude Z_{cr} after which it is assumed to vary with altitude and frequency

$$1 = \frac{CP_n(z)}{f(f + 1) \frac{1}{1V}}$$

where $P_n(z)$ is a third degree polynomial approximation of the electron concentration for $z \leq 100\text{km}$. The results of asymptotic computations are shown in Figure 1 of the Enclosure. Numerical integration is used to evaluate the normalized wave admittance \tilde{A} , from which the reflection coefficient for various angles of incidence is obtained using the standard formula. The computation was performed on a "Strela" computer using the fourth-order accuracy Runge-Kutta formula with automatic step selection. Selection of an optimum integration interval and of proper initial conditions resulted in an overall relative error in \tilde{A} of 10^{-3} . Figure 2 of the Enclosure shows the results of numerical integration while Figures 3 and 4 give a comparison of the 3 methods. Orig. art. has: 16 equations, 1 table, and 8 figures.

ASSOCIATION: Leningradskiy universitet (Leningrad University)

Card 2/7

ACCESSION NR: AT4043150

ENCLOSURE: 01

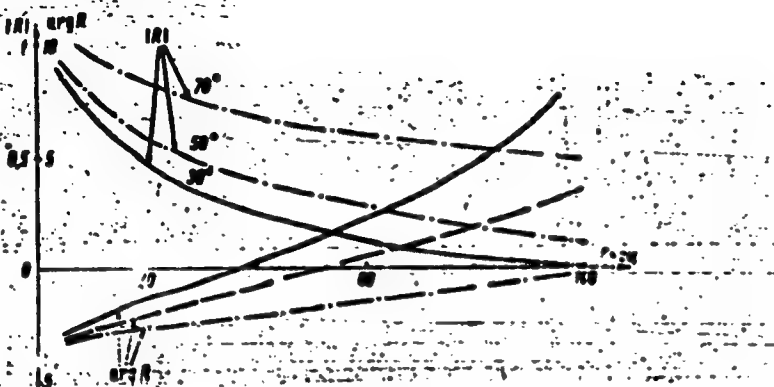


Fig. 1 Reflection coefficient $R(f) = |R(f)| e^{i \arg R(f)}$ as a function of frequency computed from the asymptotic formula for various values of the incidence angle ψ .

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ACCESSION NR: AT4043150

ENCLOSURE: 02

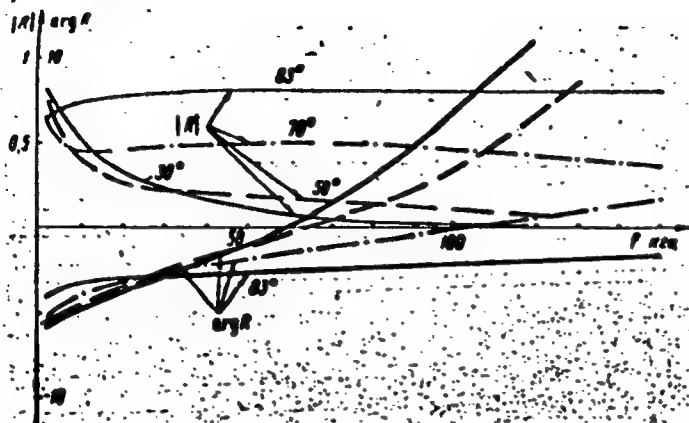


Fig. 2 Reflection coefficient $R(f) = |R(f)| e^{i \arg R(f)}$ as a function of frequency obtained by numerical integration. Parameter is angle of incidence, ψ .

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ACCESSION NR: AT4043150

ENCLOSURE: 03

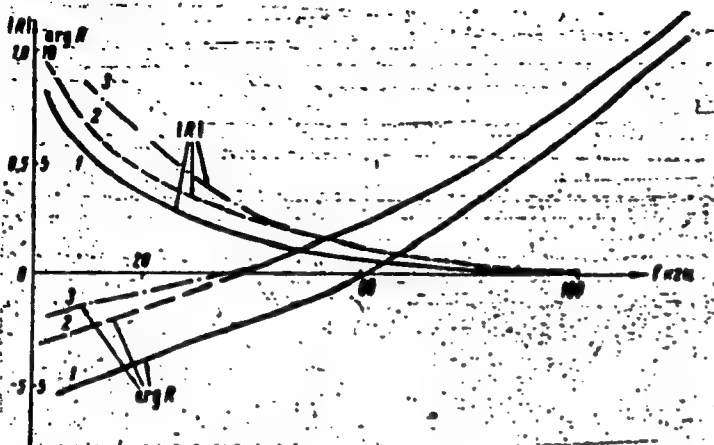


Fig. 3 Comparison of various computation methods for $\gamma = 30^\circ$:
 1 - numerical integration,
 2 - standard (asymptotic equation),
 3 - W.K.B.

Card 6/7

ACCESSION NR: AT4043150

SUBMITTED: 00

ENCL: 04

SUB CODE: EC

NR REF SOV: 007

OTHER: 000

Card 3/7

KAZARINOV, V.P., otv.red.vypuska; ROSTOVTSEV, N.N., glavnyy red.; SEGAL', Z.G., vedushchiy red.; GURARI, F.G., zamestitel' glavnogo red.; AMSHINSKIY, N.N., red.; DERBIKOV, I.V., red.; KALUGIN, A.S., red.; MALIKOV, B.N., red.; MIKUTSKIY, S.P., red.; SUKHOV, S.V., red.; TESLENKO, Yu.V., red.; UMANTSEV, D.F., red.; GAVRILOVA, N.V., red.; SAFRONOVA, I.M., tekhn. red.

[Geology and prospects for finding oil and gas in the northwestern part of the Siberian Platform.] Geologicheskoe stroenie i perspektivy neftegazonosnosti severo-zapada Sibirskoi platformy. Leningrad, Gostoptekhi-zdat, 1963. 183 p. [Trudy Sibirskogo nauchno-issledovatel'skogo instituta geologii, geofiziki i mineral'nogo syr'ya, no.28.] (MIRA 16,11)

L 10219-66 EWT(d)/EWP(e)/EWT(m)/EWP(v)/T/EWP(t)/EWP(k)/EWP(b)/EWP(l)/EWA(c)
 AGG NR: AP5028461 JD/WH/HM/WH SOURCE CODE: UR/0286/65/000/020/0029/0029

AUTHORS: Rozin, N. A.; ⁴⁴Roshchin, V. A.; ⁴⁴Gavrilova, N. V. ⁴⁴

ORG: none

TITLE: ¹⁴A device for ¹⁵soldering thin branches to ¹⁵quartz, ¹⁵ceramic, and other resonator plates of rectangular or circular form. Class 21, No. 175533 ¹⁵

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 20, 1965, 29

TOPIC TAGS: soldering, resonator

ABSTRACT: This Author Certificate presents a device for ¹⁶soldering thin branches to quartz, ceramic, and other resonator plates of rectangular or circular form. The device consists of a mechanism for determining the coordinates of the soldering point and a mechanism for delivering and clamping the branch. (See Fig. 1.) To increase the accuracy of centering the longitudinal axis of the branch, the mechanism for delivering and clamping the branch is made in the form of a spindle with a longitudinal cavity. This feeds the branch (by gravity) into a conical head at the end of the spindle (see Fig. 1). The head has a longitudinal

Card 1/2

UDC: 621.372.112.002.54

L 10219-66

ACC NR: AP5028461

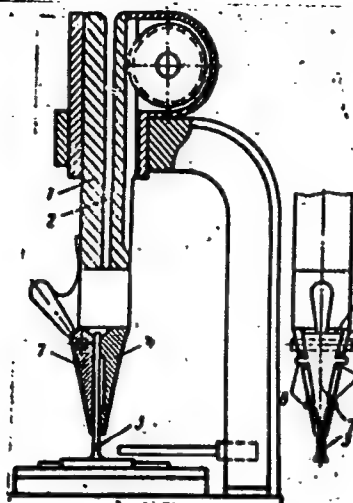


Fig. 1. 1 - Spindle;
2 - longitudinal
cavity; 3 - branch;
4 - conical head;
5 - longitudinal
angular groove;
6 - grooves;
7 - clamping wedge;
8 - transverse
projections.

angular groove in which is installed a clamping wedge with two pairs of transverse projections in grooves of the conical head. Orig. art. has: 1 figure.

SUB CODE: 13/

SUBM DATE: 01Oct63/

Card 272

FLORENSKIY, P.V.; GAVRILOVA, O.A.

Changes in the density of permotriassic sediments in Tuarkyr.
Trudy MINKHIGP no.38:122-132 '62. (MIRA 15:9)
(Tuarkyr region--Rocks, Sedimentary--Density)

24VRLLOVD, C.A.

USSR / Diseases of Farm Animals. General Problems.

R

Abs Jour: Ref Zhur-Biol., No 8, 1958, 35803.

Author : Gavrilova, O. A.

Inst : Not given.

Title : Effectiveness of Using Biomycin in Pig Husbandry.

Orig Pub: Zhivotnovodstvo, 1957, No 5, 52-54.

Abstract: When biomycin (I) was fed to pigs in doses of 20 milligrams per each feed unit, it had a stimulating effect upon the development and growth of the animals. After a month, the experimental group animals gained 3 to 4 kilograms more in weight than the control group pigs. (I) was also used as a diarrhea prophylactic measure for piglets. On the farrowing day, a suspended solution of (I) in ecmolin was administered intramuscularly in doses of 100,

Card 1/2

AKSENOVA, H.F.; MASLENNIKOV, F.V.; GAVRILOVA, O.A., starshiy nauchnyy sotrudnik

Results of use of feed antibiotics. Veterinariia 36 no.12:54-55
D '59. (MIRA 13:3)

1. Nachal'nik veterinarnogo otdela Oblsel'khozupravleniya Moskovskaya
oblast' (for Aksenova). 2. Direktor oblastnoy vetbaklaboratorii,
Moskovskaya oblast' (for Maslennikov) 3. Vsesoyuznyy nauchno-issledovatel'-
skiy institut zhivotnovodstva (for Gavrilova).
(Antibiotics)

GAVRILOVA, O. A.

"Antibiotics in cattle-breeding."

Veterinariya, Vol. 37, No. 2, 1960, p. 64

(GAVRILOVA, O. A.) - Cand. Vet. Sci., All-Union Sci. Res. Cattle-Breeding Inst.

KORENYAKO, A.I., kand. biol. nauk; GAVRILOVA, O.A., kand. sel'khoz. nauk

Preparation "Vitamicin." Vest. AN SSSR 32 no.6:80-82 Je '62.
(MIRA 15:6)

(VITAMINS-A)

OMH.

name: HIRSH
(OMH 18:3)

12/17/68

CHINGAYEV, I.F.; GAVRILOVA, O.A., starshiy nauchnyy sotrudnik

Application of grisin on collective and state farms of Moscow
Province. Veterinariia 39 no.11:65-66 N '62. (MIRA 16:10)

1. Glavnyy veterinarnyy vrach veterinarnogo otdela Moskovskogo
oblastnogo upravleniya proizvodstva i zagotovok sel'skokho-
zyaystvennykh produktov (for Chingayev). 2. Vsesoyuznyy
nauchno-issledovatel'skiy institut zhivotnovodstva (for Gavrilova).

GAVERILOVA, O. I., Cand Chem Sci -- (diss) "The chemical characteristics of vitreous and fusains of metamorphic series of Donbas coals," Moscow, 1960, 23 pp, (Institute of combustible Minerals, Academy of Sciences USSR).

(XL, 38-60, 106)

GAVRILOVA, O.I. (Leningrad)

Comparing certain methods of determining hydroxyl groups on Donets
Basin coal vitrains. Izv. AN SSSR. Otd. tekhn. nauk. Met. 1 topl. no. 4:
187-188 J1-Ag '60. (MIRA 13:9)
(Donets Basin--Coal--Testing) (Hydroxyl groups) (Acetulation)

VOLKOVA, I.B.; NALIVKIN, D.V.; SLATVINSKAYA, Ye.A.; BOGOMAZOV, V.M.;
~~GAVERILOVA, O.I.~~; GUREVICH, A.B.; MUDROV, A.M.; NIKOL'SKIY, V.M.;
 OSHURKOVA, M.V.; PETRENKO, A.A.; POGREBITSKIY, Ye.O.; RITENBERG,
 M.I.; BOCHKOVSKIY, F.A.; KIM, N.G.; LUSHCHIKHIN, G.M.; LYUBER,
 A.A.; MAKEDONTSOV, A.V.; SENDERZON, E.M.; SINITSYN, V.M.; SHORIN,
 V.P.; BELYANKIN, L.F.; VAL'TS, I.E.; VLASOV, V.M.; ISHINA, T.A.;
 KONIVETS, V.I.; MARKOVICH, Ye.M.; MOKRINSKIY, V.V.; PROSVIRYAKOVA,
 Z.P.; RADCHENKO, O.A.; SEMERIKOV, A.A.; FADDEYEVA, Z.I.; BUTOVA,
 Ye.P.; VERBITSKAYA, Z.I.; DZENS-LITOVSKAYA, O.A.; DUBAR', G.P.;
 IVANOV, N.V.; KARPOV, N.F.; KOLESNIKOV, Ch.M.; NEFED'YEV, L.P.;
 POPOV, G.G.; SHTEMPEL', B.M.; KIRYUKOV, V.V.; LAVROV, V.V.;
 SAL'NIKOV, B.A.; MONAKHOVA, L.P.[deceased]; MURATOV, M.V.;
 GORSKIY, I.I., glav. red.; GUSEV, A.I., red.; MOLCHANOV, I.I.,
 red.; TYZHN OV, A.V., red.; SHABAROV, N.V., red.; YAVORSKIY, V.I.,
 red.; REYKHERT, L.A., red.izd-va; ZAMARAYEVA, R.A., tekhn. red

[Atlas of maps of coal deposits of the U.S.S.R.] Atlas kart ugle-
 nakopleniya na territorii SSSR. Glav. red. I.I.Gorskiy. Zam.
 glav. red. V.V.Mokrinskiy. Chleny red. kollegii: F.A.Bochkovski
 i dr. Moskva, Izd-vo Akad. nauk SSSR, 1962. 17 p.
 (MIRA 16:3)

1. Akademiya nauk SSSR. Laboratoriya geologii uglia. 2. Chlen-
 korrespondent Akademii nauk SSSR (for Muratov).
 (Coal geology—Maps)

KASATOCHKIN, V. I. (Moskva); YEGOROVA, O. I. (Moskva); GAVRILOVA,
O. I. (Moskva)

Spectrochemical characteristics of the metamorphism of coal.
Izv. AN SSSR. Otd. tekhn. nauk. Met. i topl. no. 6:192-195
(MIRA 16:1)
M-D '62.

(Coal—Spectra) (Metamorphism(Geology))

VOLKOV, V.N.; GAVRILOVA, O.I.; TOROPETS, S.A.

Relationship between specific gravity and density in the peat -
anthracite series. Izv. AN SSSR.Ser.geol. 28 no.8:86-96 Ag '63.
(MIRA 17:2)

1. Ekspeditsiya No.5 Vsesoyuznogo nauchno-issledovatel'skogo geologicheskogo instituta, Leningrad.

BOGDANOVA, L.A.; GAVRILOVA, O.I.; TOPORETS, S.A.

Changes taking place in hard coal under the effect of minor
transgressive intrusions. Dokl. AN SSSR 159 no.3:564-567 N '64.
(MIRA 18:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskii institut
(VSEGEI). Predstavleno akademikom N.M. Strakhovym.

GAVRILOVA, O.M.

Role of "supplementary" sperms in the fertilization process of plants. Izv.
AN SSSR Ser. biol. no. 6:37-45 N-D '53. (MLRA 6:11)

1. Kafedra darvinizma Moskovskogo ordena Lenina Gosudarstvennogo universiteta
im. M.V. Lomonosova. (Fertilization of plants)

FD -1577

USSR/Biology

GAVRILEVA, O.M.

Card 1/ : Pub. 42-9/11

Author : Gavrileva, O. M.

Title : ~~Abstract~~
Brief sketch on the history of the question of the role played by the amount of male sex elements in fertilization

Periodical : Izv. AN SSSR. Ser. biol. 5, 110-121, Sep-Oct 1954

Abstract : Discusses the question of the possibility of penetration by extra spermatoozoids and spermatozoons of the egg in fertilization and presents observations and findings of numerous researchers in this field. Also examines the role played by "additional" sperm which penetrate the vegetative tissue of plants and somatic tissue of animals. Criticizes the theory of monosperm fertilization. Micro-section drawings. Forty references: 35 USSR (26 since 1940).

Institution : Moscow State University

Submitted : July 5, 1954

GAVRILOVA, O.M.

Some growth characteristics of pollen tubes in wheat as related to
the phenomenon of multiple fertilization. Trudy Inst. gen. no.28:
200-207 '61. (MIRA 14:11)

(FERTILIZATION OF PLANTS)

GAVRILOVA, O.M.

Possible participation of additional pollen tubes and
spermatozoids in fertilization in wheat ovaries. Trudy Inst.
gen. no.29:231-237 '62. (MIRA 16:7)

(Wheat) (Fertilization of plants)

GAVRILOVA, O.M.

Some characteristics of the genesis of spermatozooids in the tissues
of a wheat ovary. Trudy Inst. gen. no.30:291-300 '63. (MIRA 17:1)

GAVRILOVA, O.M.

Effect of the amount of pollens on the fertilization process in
Mirabilis jalapa. Dokl. AN SSSR 151 no.6:1444-1445 Ag '63.
(MIRA 16:10)

1. Predstavleno akademikom T.D.Lysenko.

GAVRILOVA, G.M.

Significance of the number of pollens in the fertilization of
plants. Trudy Inst. gen. no. 31:212-221 '64. (MIRA 17:9)

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S/081/60/000/012(II)/010/010

AO06/A001

15-9220

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 12(II), p. 632, # 49474

AUTHOR: Gavrilova, O.V.

TITLE: The U-30M (U-30M) Fuel-Temperature Packing Material

PERIODICAL: Za tekhn. progress (Sovnarkhoz Gor'kovsk. ekon. adm. r-na), 1958,
No. 8-9, pp. 39-40

TEXT: The author investigated the properties of the U-30M packing material (hermetics) which is a polysulfide polymer capable of self-vulcanization at room temperature. The investigation reveals that U-30M is sufficiently kerosene- and humidity-resistant and possesses the necessary adhesion properties. U-30M may be used at 15-35°C. Complete vulcanization of U-30M at 20°C takes place within 7-10 days. At a temperature raised to 100°C, the vulcanization process is reduced to 8 hours. Negative properties of U-30M are: short service-life; insufficient scale resistance and low stability. 15

V. Zrelov

Translator's note: This is the full translation of the original Russian abstract.

[Annotation: This appears to be a thiokol rubber.]

Card 1/1

KALINICHENKO, I.I.; NIKITIN, V.D.; GAVRILOVA, R.A.

Studying the conditions for the preparation of pure ammonium
lactate in the crystalline state. Prom. khim. reak. i osobo
chist. veshch. no.1:8-13 '63. (MIRA 17:2)

16.6800(1024,1250,1344)
9.7000

84320
S/170/60/003/009/016/020X
B019/B060

AUTHORS: Berlyand, O. S., Gavrilova, R. I., Prudnikov, A. P.

TITLE: Functions¹⁶ Satisfying the Differential Equation 16
 $y'' + 2xy' + 2ny = 0$

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1960, Vol. 3, No. 9,
pp. 103-107

TEXT: In the first part of the present paper it is shown that the function $y'' + 2xy' + 2ny = 0$ is satisfied by the integral functions

$$i^n \operatorname{erfc} x = \int_x^\infty i^{n-1} \operatorname{erfc} \xi d\xi \quad (n \geq 1), \text{ for } i^0 \operatorname{erfc} x = \operatorname{erfc} x = \frac{2}{\sqrt{\pi}} \int_x^\infty \exp(-\xi^2) d\xi.$$

Also examined was the function $I^n \operatorname{erfc} x = A_n i^n \operatorname{erfc} x$, with $I^0 \operatorname{erfc} x = i^0 \operatorname{erfc} x$.
Such series as, e.g., the Maclaurin series were obtained:

Card 1/2

Functions Satisfying the Differential
Equation $y'' + 2xy' + 2ny = 0$

84320

S/170/60/003/009/016/020 X
B019/B060

$$i^n \text{erfcx} = \sum_{m=0}^{\infty} (-1)^m \frac{A_n}{A_{n-m}} \cdot \frac{x^m}{m!} \quad (3).$$

In the second part the differential

equation $y'' + 2xy' + 2ny = 0$ is shown to be satisfied by the function $i^{-n} \text{erfcx}$, and in the third part the Hermitian polynomial $H_n(x)$ is found to satisfy the differential equation $H_n''(x) - 2xH_n'(x) + 2nH_n(x) = 0$ and $H_{-n}(x)$ the differential equation $H_{-n}''(x) - 2xH_{-n}'(x) - 2nH_{-n}(x) = 0$. The following relations exist between the functions $H_n(x)$, $H_{-n}(x)$, $i^n \text{erfcx}$, and $i^{-n} \text{erfcx}$:

$$i^{-(n+1)} \text{erfcx} = \frac{2}{\sqrt{\pi}} e^{-x^2} H_n(x), \quad i^n \text{erfcx} = \frac{2}{\sqrt{\pi}} e^{-x^2} H_{-n(n+1)}(x).$$

Proceeding from these relations, formulas are developed for numerical calculations. There are 5 references: 2 Soviet and 3 British.

ASSOCIATION: Vychislitel'nyy tsentr AN SSSR, g. Moskva
(Computing Center of the AS USSR, Moscow)

SUBMITTED: March 4, 1960
Card 2/2

GAYRILOVA, R.I.; PRUDNIKOV, A.P.

Problem in the theory of thermal conduction. Inzh.-fiz.zhur. no.5:
136-137 My '60. (MIRA 13:8)

1. Institut energetiki AN BSSR, Minsk.
(Heat--Conduction)

GAVRILOVA, R.I.

Kinetics of drying with variable heat and mass transfer coefficients.
Inzh.-fiz. zhur. 7 no.8:37-42 Ag '64. (MIRA 17:10)

1. Institut teplo- i massoobmena AN BSSR, Minsk.

BERLYAND, O.S.; GAVRILOVA, R.I.; PRUDNIKOV, A.P.; DITKIN, V.A., prof.,
otv. red.; BARABANOVA, Ye., red. izd-va; SIDERKO, N., tekhn.
red.

[Tables of integral functions, errors, and Hermitian polynomials]
Tablitsy integral'nykh funktsii oshibok i polinomov Ermita. Minsk,
Izd-vo Akad. nauk BSSR, 1961. 163 p. (MIRA 14:10)
(Mathematics--Tables, etc.)

S/759/62/000/004/003/016
D207/D308

AUTHORS: Gavrilova, R. K., Milovanov, O. S. and Sobenin, N. P.

TITLE: Experimental data on the frequency response characteristic of a circular diaphragm-type waveguide with a constant phase velocity

SOURCE: Inzhenerno-fizicheskiy institut. Uskoriteli, no. 4, 1962, 12-19, Moscow

TEXT: A method is given for the assembly of sections of a circular waveguide which ensures the best frequency characteristic in a linear electron accelerator. The waveguide used in this work had the following parameters: $a/\lambda = 0.155$, $a/b = 0.383$, $\beta = 0.998$; here a is the radius of the apertures in the diaphragms (corrugations), b is the inner radius of the waveguide itself, β is the phase velocity and λ is the wavelength. The sections consisted each of one ring (internal diameter tolerances of -20 to $+50 \mu$, thickness tolerances of -10 to -150μ) and one annular diaphragm (aperture diameter tolerances of -10 to -40μ). It is shown that

Card 1/2

Experimental data on ...

S/759/62/000/004/003/016
D207/D308

the best frequency characteristic is obtained by assembling these sections according to increasing or decreasing frequency g of $\pi/2$ modes in them. The frequency f need not be known: only the deviations Δf from the calculated value of f must be measured. In this way a good frequency characteristic can be obtained for 1 or 2 m long waveguides working at $\lambda = 3$ cm or less. For example, the energies of electrons obtained from an accelerator γ -12 (U-12) were altered by less than 2% for $\Delta f = 2$ Mc/s of the sections assembled according to increasing or decreasing f . There are 7 figures.

Card 2/2

S/759/62/000/004/004/016
D207/D308

AUTHORS: Gavrilova, R. K., Milovanov, O. S., Sobenin, N. P. and
Shchedrin, I. S.

TITLE: Frequency response characteristic of a waveguide buncher
for a linear electron accelerator

SOURCE: Inzhenerno-fizicheskiy institut. Moscow. Uskoriteli,
no. 4, 1962, 20-28

TEXT: It is shown that a 120 cm long buncher for a 3 MeV accelerator of γ -10 (U-10) type must have a microwave reflection coefficient not greater than 0.07 at \pm (6-8) Mc/s from the working frequency. The buncher considered is of the corrugated (diaphragm) type and suffers from (1) relatively high wave admittance in the first sections producing considerable reflections, and (2) inaccuracies in the section dimensions giving rise to further reflections. The effect (1) can be reduced by using thinner diaphragms. This does not alter the electron-beam parameters since the accelerating field intensity does not vary strongly with the diaphragm thick-

Card 1/2

Frequency response characteristic ...

S/759/62/000/004/004/016
D207/D308

ness and the resultant phase velocity changes can be compensated by varying the inner diameter of the waveguide itself in the first sections. The effect (2) can be reduced by a suitable selection of rings and diaphragms forming the buncher sections: three identical rings, two half-rings and two pairs of diaphragms are used. The success of this arrangement is demonstrated by almost complete similarity of the transmission band of the input-waveguide transformer and the same transformer coupled to the buncher, indicating a transformer/buncher reflection coefficient of 0.1 in the + 15 Mc/s range on both sides of the working frequency. There are 7 figures.

Card 2/2

1. GAVRILOVA, S.
2. USSR 600
4. Rivers - Poland
7. Today and tomorrow of Polish rivers, Mol. kolkh, 20, No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

GAVRILOVA, S. A.

29500

Pyervyye Russkiye Shkol'nyye Gxeograficheskiye Atlasy. Trudy Tsyentr.
Nauch-islyed. ih-ta Gyeodreii. Aeros"yemki i Kartografii. vyp. 55, 1949, s,
8.14.

So: Letopis' No. 40

CAVRILOVA. S. A.

Russian geographical atlases for schools. Vop. geog. 27, 1951.

BARANSKIY, Nikolay Nikolayevich; ~~TEREKHOV~~, P.G., redaktor; GAVRILOVA, S.A.,
redaktor; KOSHCHINA, S.M., tekhnicheskii redaktor

[Historical survey of geography textbooks, 1876-1934] Istoricheski
obzor uchebnikov geografii; 1876-1934. Moskva, Gos. izd-vo geografi-
cheskoi lit-ry, 1954. 501 p. (MLRA 8:3)
(Geography--Textbooks)

GAVRILOVA, S.A.

Maps of Leonardo da Vinci. Vop.geog. no.34:161-173 '54. (MLRA 7:12)
(Maps, Early) (Leonardo da Vinci, 1452-1519)

GAVRILOVA, S.A.; KONKOV, A.M.

"Russian economic maps and atlases." A.I.Preobrazhenskii. Reviewed by
S.A.Gavrilova, A.M.Konkov. Vop.geog. no.34:187-191 '54. (MLRA 7:12)
(Preobrazhenskii, A.I.) (Geography, Economic)

GAVRILOVA, S.A.

School cartography. Vop.geog. no.37:38-46 '55. (MIRA 8:12)
(Geography--Study and teaching) (Kolosovskii, Nikolai Nikolaevich,
1891-1954)

GAVRILOVA, S.A.

The centenary of "Petermanns Geographische Mitteilungen." Vop.geog.
no.42:196-198 '58. (MIRA 11:11)
(Germany--Geography--Periodicals)

GAVRILOVA, S.A.

New foreign books on the history of cartography. Vop.geog.
no.42:221-227 '58. (MIRA 11:11)
(Cartography)

GAVRILOVA, S.A.; POKSHISHEVSKIY, V.V., prof., red.; ~~CHUKANOVA~~, L.V., red.

[Economic administrative regions of the U.S.S.R.; catalog of new literature on nature, resources and economy] Ekonomicheskie administrativnye raiony SSSR; ukazatel' novoi literatury po prirode, resursam i khozisiatvu. Pod red. V.V.Pokshishevskogo. Moskva. No.8. [Regions of the Far East] Raiony Dal'nego Vostoka. 1958. 42 p. (MIRA 12:10)

1. Akademiya nauk SSSR. Institut nauchnoy informatsii.
(Siberia, Eastern--Economic conditions)

SEMEYOV, A.I., otv.red.; FILIPPOV, Yu.V., prof., doktor tekhn.nauk, red.;
 BASHILAVIN, V.A., kand.tekhn.nauk, red.; VOYNOVA, V.V., red.; GURARI,
 Ye.L., kand.ekonom.nauk, red.; GUREVICH, I.V., red.; ZHIV, I.S., red.;
 ZARUTSKAYA, I.P., red.; ZASLAVSKIY, I.I., red.; KOZLOV, F.M., red.;
 NIKISHOV, M.I., kand.geograf.nauk, red.; SADCHIKOV, S.P., red.;
 TIKHOMIROV, D.I., red.; TUTCHKINA, V.A., red.; BALANTSEVA, I.A., red.
 kart; BOGDANOVA, L.A., red.kart; BOCHAROVA, I.L., red.kart; VENEVTSEVA,
 G.P., red.kart; VOLKOVA, A.P., red.kart; GOSTEVA, N.A., red.kart;
 YEFIMOVA, G.N., red.kart; ZHIV, D.I., red.kart; KRAVCHENKO, A.V., red.
 kart; KUBRIKOVA, N.S., red.kart; KUZNETSOVA, N.A., red.kart; KURSAKOVA,
 I.V., red.kart; LOBZOVA, N.A., red.kart; MERTSALOVA, L.M., red.kart;
 MOSTMAN, S.L., red.kart; PANFILOVA, M.V., red.kart; SEMENOVA, V.D.,
 red.kart; SMIRNOVA, T.N., red.kart; TERESHKOVA, V.S., red.kart;
 FEDOROVSKAYA, G.P., red.kart; FETISOVA, N.P., red.kart; FIL'GUS, Z.Kh.,
 red.kart; SHAPIRO, Ye.M., red.kart; SHISHKIN, Ye.A., red.kart; YASHU-
 NICHKINA, Ye.G., red.kart. V razrabotke kart prinimali uchastiye:
 ALISOV, B.A., prof.; BERZINA, M.Ya.; VASILEVSKIY, L.I.; GAVRILOVA,
 S.A., kand.geograf.nauk; GINZBURG, G.A., kand.tekhn.nauk; DOBOSHINSKAYA,
 I.B.; YEVSTIGHNEVA, A.I.; LAVRENKO, Ye.M., prof.; LOZINOVA, V.M., kand.
 tekhn.nauk; MILANOVSKIY, Ye.Ye., kand.geologo-mineral.nauk; MIKHAYLOV,
 A.A., prof.; MYSHKIN, Ye.P.; PUZANOVA, V.P., kand.geograf.nauk;
 (Continued on next card)

~~SE~~SENOV, A.I.---(continued) Card 2.

ROZOV, N.N., prof.; SMIRNOV, D.I.; TARASOV, A.P.; TROFIMOVSKAYA, Ye.A., kand.geograf.nauk; TUGOLESOV, D.A., kand.geologo-mineral. nauk. ZININ, I.P., tekhn.red.

[Geographical atlas for secondary school teachers] Geograficheski atlas; dlia uchitelei srednei shkoly. Izd.2. Moskva, Glav.upr. geodezii i kartografii MVD SSSR, 1959. 191 p. (MIRA 12:11)

1. Predstavitel' Nauchno-issledovatel'skogo instituta metodov obucheniya Akademii pedagogicheskikh nauk RSFSR (for Zaslavskiy).
2. Predstavitel' Upravleniya shkol Ministerstva prosvyashcheniya RSFSR (for Tutochkina).
3. Chleny-korrespondenty AN SSSR (for Lavrenko, Mikhaylov).

(Maps)

GAVRILOVA, S. A., AND PERMYCHENKO, I. I.

"Organization of Geographical Bibliography in the USSR"

report to be submitted for the Intl. Geographical Union, 10th General Assembly
and 19th Intl. Geographical Congress, Stockholm, Sweden, 1-13 August 1960.

NIZHARADZE, Nadim Izetovich, kand. geogr. nauk, dots; GAVRILOVA, S., red.;
DZHIBUTI, N., red.; GOBRONIDZE, V., tekhn. red.

[Soviet Adzharia; economic and geographical features] Sovetskaiia
Adzhariia; ekonomiko-geograficheskaiia kharakteristika. Batumi,
Gos. izd-vo, 1961. 259 p. (MIRA 14:10)
(Adzharistan—Economic geography)

GAVRILOVA, S.A.

"K.I. Arsen'ev and his work on the regionalization of Russia"
by E.N. Pertsik. Reviewed by S.A. Gavrilova, Geog. i khoz.
no.9:84 '61.

(MIRA 14:11)

(Geography)

(Pertsik, E.N.)

GAVRILOVA, S.A.; BOLDOV, V.G.

Present state of the geography section in the Universal Decimal
Classification and its use in the abstract journal "Geografiia."
NTI no.8:11-12 '63. (MIRA 16:10)

GAVRILOVA, S.A.; BOLDOV, V.G.

A new version of the section "Geography" in the universal decimal classification. Izv. Vses. geog. ob-va 95 no.6:537-539 N-D '63. (MIRA 17:1)

KONDRASHKOV, A.V.; GAVRILOVA, S.A.; BOLDOV, V.G.

Comparison of the content of the sections on geodesy, aerophotography, and cartography in the Universal Decimal Classification System, the classification system of the Moscow Public Library, and the system of subject headings in "Geodeziia", a journal of abstracts. NTI no.3: 33-35 '64. (MIRA 17:9)

CAVRILVA, S.A., Cond Chem Sci—(disc) "Study in the field of hetero-
polycompounds of ^{tetravalent} ~~four-valence~~ cerium." Mos, 1958. 5 pp (Mos Order of
Lenin and Order of Labor Red Banner State U in P.V.Lomonosov (KL, 45-58, 142)

- 21 -

AUTHORS: Shakhova, Z. P., Gavrilova, S. A. 78-3-6-13/30

TITLE: Synthesis of Cerium Molybdenum Heteropolyacids (K sintezu tserimolibdenovoy geteropolikisloty)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 6, pp. 1370-1373 (USSR)

ABSTRACT: The heteropolyacids of the rare earths have been investigated relatively little. In the present paper the heteropolyacid of cerium with molybdic acid was isolated in pure form and investigated.
The cerium molybdenum heteropolyacid was isolated in pure form by the chromatographic method using cationites. It was found that the greatest yield of cerium molybdenum heteropolyacid can be obtained by means of the cationite KU-2. The analysis of the cerium molybdenum heteropolyacid shows that the ratio of Ce : Mo is - 1 : 12 in the solution. The cerium molybdenum heteropolyacid was isolated in form of a yellow vitreous mass. The solution of cerium molybdenum heteropolyacid was investigated spectrophotometrically and it was found on this occasion that the absorption maximum is at $\lambda = 380$ m μ . An analytical method for the analysis of

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the cerium molybdenum heteropolyacid was elaborated. An ammonia salt of the cerium molybdenum heteropolyacid was produced and analyzed. This salt has the following composition:
 $(\text{NH}_4)_8[\text{Ce}(\text{Mo}_2\text{O}_7)_6] \times \text{H}_2\text{O}$.

There are 6 tables and 6 references, 2 of which are Soviet.

SUBMITTED: March 11, 1957

AVAILABLE: Library of Congress

1. Cerium molybdenum heteropolyacids--Synthesis 2. Chromatographics
--Applications

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AUTHORS: Shakhova, E. F., Gavrilova, G. A. 75-13-2-10/27

TITLE: Photometric Determination of Cerium as Cerium-Molybdenum Heteropolyacid (Fotometricheskoye opredeleniye tseriya v vide tserinolibdenovoy geteropolikisloty)

PERIODICAL: Zhurnal Analiticheskoy Khimii, 1958, Vol. 13, Nr 2, pp. 211-214 (USSR)

ABSTRACT: Of the photometric determination methods for small quantities of cerium, described in publications, this method is most sensitive and widely spread, being based upon the formation of a colored complex by hydrogen peroxide in the presence of citrates (References 1,2) or carbonates (References 3,4). Other methods (References 5-12) are either less sensitive or more complicated as to their produce. The main deficiency of the method with H_2O_2 is that the previous separation of cerium from the heavy metals and from molybdenum is absolutely necessary. Therefore the authors worked out a new photometric method which is based upon the formation of a cerium-molybdenum heteropolyacid. The optimum conditions for the formation

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Photometric Determination of Cerium and Cerium-Molybdenum Heteropolyacid

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of this complex were sought. It appeared that the completeness of the formation of the cerium-molybdenum complex depends on the excess of the molybdate in the solution. The investigations were performed in 0,2 n sulfuric acid solution. The influence of the concentration of the molybdate in the solution and the influence of the hydrogen-ion concentration on the completeness of the formation of the complex was investigated. A 60-fold surplus of sodium molybdate and a 0,2 sulfuric acid solution were found as optimum conditions for the determination of cerium as cerium-molybdenum heteropolyacid.

The authors also investigated the stability of the formed complex. The cerium-molybdenum heteropolyacid shows a good time stability, the stability, however, being temperature dependent. A temperature rise reduces the intensity of the color. Besides, the stability of the already formed cerium-molybdenum complex was examined in the case of a change of the hydrogen-ion concentration. It appeared, that the complex is decomposed in case of increase of the hydrogen-ion concentration. In case of addition of hydrochloric acid the

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change of the optical density is different, as it is caused by a redox-reaction. A comparison with perchloric acid showed that the complex is decomposed by the increase of the hydrogen-ion concentration and not by the complex-forming action of sulfuric acid. The cerium-molybdenum complex is stable only in a small range of the hydrogen-ion concentration, this in 0,1n - 0,3n sulfuric acid and in up to 0,4n perchloric acid solution. The color intensity of the solutions of the cerium-molybdenum heteropolyacid obeys the Beer law. The sensitivity of the reaction is 1 μ g Ce per ml. For the photometric determination that much sulfuric acid is added to a solution, containing 0,025 to 0,4 mg cerium, so that the concentration in the final volume is 0.2n. Then 12 ml of a 5% neutral solution of sodium molybdate or 10 ml of a 5% ammonium molybdate solution is added, diluted with water to 25 ml and then the optical density is measured after 10 minutes on a spectrophotometer of the type SF-4 at 380 m μ .

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Photometric Determination of Cerium-Molybdenum
Heteropolyacid

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(gap width 0.4 mm).

There are 7 figures, 1 table and 12 references, 7 of which
are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
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SUBMITTED: March 12, 1957

1. Cerium--Determination
2. Cerium-molybdenum compounds--Analysis
3. Photometry--Applications

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Products of the addition of some organic bases to cerimolybdenum heteropoly acids. Vest Mosk. un. Ser. mat., mekh., astron., fiz., khim. 14 no.2:179-183 '59 (MIRA 13:3)

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Synthesis of molybdothoric heteropoly acid. Zhur.neorg.khim. 7 no.7:1752-
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